

this continuing educational process must somehow become more efficient. Among other things, this will require more attention to what new information needs to be disseminated to whom, and to the special educational needs of that most important recipient, the individual practicing physician. In addition, motivation of the busy physician and means to fill his needs must somehow be built in, together with suitable mechanisms to evaluate the effectiveness of the entire process.

The situation may realistically be viewed as one of an expanding universe of medical science in interaction with another expanding universe of demands upon the practicing physician for services to patients, other health professionals, the community, the state, the nation and, perhaps before we even realize it, the world. But in this expanding situation the number of hours in any doctor's day remains absolutely constant. This inescapable fact sharply limits what any physician can do in a day or even a lifetime, and emphasizes that not a moment of the time he can devote to his continuing education should be wasted.

Since each physician possesses a different body of knowledge and experience, it would seem logical that his program of continuing education should be individualized if his time for this purpose is to be used most productively. It therefore follows that the somewhat diffuse concept of "continuing education" for all physicians will necessarily evolve into a more specialized, even personalized approach emphasizing "continuing *his* education" for each practicing physician. This could and should be truly stimulating for all concerned.

Changing Concepts of Coronary Care

THE HIGH MORTALITY rate associated with acute myocardial infarction together with the development of reliable monitoring systems and effective resuscitative techniques stimulated the creation of coronary care units. The original concept of prompt resuscitation of patients in cardiac arrest proved to have limited therapeutic potential; most of the patients died. The recognition of premonitory signs of serious arrhythmia and the introduction of effective antiarrhythmic drugs and pace-

makers has produced in recent years a shift in emphasis to prevention of life-threatening dysrhythmias. Several studies clearly document the efficacy of this approach.^{1,2}

However, mortality from acute myocardial infarction complicated by shock or severe heart failure remains distressingly high. Clearly, indices of myocardial function should be monitored in this group of patients. Many coronary units now are utilizing hemodynamic and biochemical measurements for assessing the degree of myocardial dysfunction as well as the response to various therapeutic programs. Such an approach, obviously, calls for an exceptionally skilled physician-nurse team.

The cornerstone of effective coronary care is this highly trained cadre of physicians and nurses. The nurses must be highly skilled in recognizing premonitory danger signals and should be empowered to initiate appropriate therapy. In this issue of CALIFORNIA MEDICINE, Stein and his associates report the need for trained personnel in established (or projected) units in California. Lack of the needed training may, in part, explain the observed under-utilization of nursing staff within some existing units. The need for properly trained personnel is an important community health priority and we applaud the efforts of the California Heart Association and the Regional Medical Programs* in expanding physician-nurse training programs to meet this need.

*Regional Medical Programs recently has approved three operational grants for the training of physicians and nurses working in Coronary Care Units. These grants have been awarded to Area 1 (University of California at San Francisco), Area 5 (University of Southern California), and Area 4 (University of California at Los Angeles).

REFERENCES

1. Lown, B., Fakhro, A., Hood, W. B., and Thorn, G. W.: The coronary care unit: new perspectives and directions, JAMA 199:188, 1967.
2. Killip, T., and Kimball, J. T.: Treatment of myocardial infarction in a coronary care unit, Amer. J. Cardiol. 20:457, 1967.

Doctrine In An Age of Science

A RECENT AND far reaching pronouncement of doctrine from across the sea invites thoughtful consideration of what is to be the place of doctrine from whatever source in a rapidly materializing age of science. Webster defines doctrine as "something that is taught: something that is held, put forth as true, and supported by a teacher, a school